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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/597,553	06/19/2000	Jung Won Kang	YHK-047	4966

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EXAMINER
SAID, MANSOUR M

ART UNIT	PAPER NUMBER
2673	

DATE MAILED: 08/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/597,553	Jung Won Kang et al.
Examiner	**Art Unit**
Mansour M. Said	2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Jun 19, 2000* .

2a) ☐ This action is **FINAL.** 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-3, 7, and 10-13* is/are rejected.

7) ☒ Claim(s) *4-6, 8, 9, and 14* is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some* c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoo et al. (6,271,810) in view of Yoo (6,340,866).

3. As to claim 1, Yoo et al. (figure 2) teaches a radio frequency plasma display panel comprising a plurality of discharge cells including a plurality of first electrode (address electrode, (42)) lines and a plurality of second electrodes (scanning electrode, (44)) being formed in such a manner that they cross each other with having a dielectric layer (48A and 48B) therebetween for causing a discharge, and each discharge cell arrange the first and second electrode lines in parallel to each other within the discharge cell (abstract, column 4, lines 25-67, column 5, lines 1-67, and column 6, lines 25-67).

Yoo et al. does not expressly disclose that an auxiliary electrode.

However, Yoo teaches an auxiliary electrodes (additional electrodes) column 3, line 65 through column 4, lines 7).

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate Yoo's device teaching an auxiliary electrodes (additional electrodes) into Yoo et al. device so as to generate continuously a display discharge by the charge particles (column 4, lines 5-7).

As to claim 2, Yoo et al. (figure 2) teach wherein the first electrode is an address electrode formed on a substrate, and the second electrode line is a scanning electrode formed on the dielectric layer covering the address electrode (column 4, lines 25-67, and column 5, lines 1-67).

As to claim 3, Yoo et al. teach address electrode to be perpendicular to the address electrode at a position adjacent to an intersection between the address electrode and the scanning electrode, and is arranged at a position parallel to the scanning electrode (column 4, line 25 through column 5, line 20).

Yoo et al. does not expressly disclose that an auxiliary electrode.

However, Yoo teaches an auxiliary electrodes (additional electrodes) column 3, line 65 through column 4, lines 7).

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate Yoo's device teaching an auxiliary electrodes (additional electrodes) into Yoo et al. device so as to generate continuously a display discharge by the charge particles (column 4, lines 5-7).

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoo et al. in view of Yoo.

Yoo et al. (figure 2) teaches 7.a radio frequency plasma display panel, comprising the steps of forming a plurality of first electrode lines on a substrate (abstract, column 4, lines 25-67 and column 5, lines 1-50); entirely coating a first dielectric material to cover electrode and the first electrode lines (figure 2, column 4, lines 25-67 and column 5, lines 1-20); and forming a plurality of second electrode lines perpendicular to the first electrode lines (figure 2, column 4, lines 28-67 and column 5, lines 1-67).

Yoo et al. does not expressly disclose that a first auxiliary electrode.

However, Yoo teaches a first auxiliary electrodes (additional electrodes) column 3, line 65 through column 4, lines 7).

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate Yoo's device teaching an auxiliary electrodes (additional electrodes) into Yoo et al. device so as to generate continuously a display discharge by the charge particles (column 4, lines 5-7).

5. Claims 10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoo et al. in view of Yoo.

As to claim 10, Yoo et al. teaches a driving apparatus for a radio frequency plasma display having discharge cells, each of which has scanning electrodes and address electrodes crossing

each other with having a dielectric layer therebetween on a first substrate to cause a writing discharge, arranged in a matrix type, and including radio frequency electrodes formed on a second substrate opposed to the first substrate to cause a radio frequency sustaining discharge along with the scanning electrodes, said driving apparatus (figures 2-3, 4A-4D, abstract, column 4, lines 29-67, column 6, lines 1-67 and column 6, line 25-67); the scanning electrode and the address electrode for each discharge cell to position the scanning electrode and the address electrode in parallel to each other within the discharge cell (figures 2-3, abstract, column 4, lines 29-67, column 5, lines 1-67); a radio frequency signal driver for applying a radio frequency signal having a higher frequency than a commercial alternating current voltage to the radio frequency electrode (column 4, lines 25-67, column 5, lines 1-20 and column 6, lines 55-67); and a pulse signal driver (data/scanning signal generator, (figures 10-11, (86)) for applying a scanning pulse and a data pulse having a frequency of the commercial alternating current voltage to the scanning electrode and the address electrode, respectively (column 8, lines 62 through column 9, lines 35).

Yoo et al. does not expressly disclose that an auxiliary electrode.

However, Yoo teaches an auxiliary electrodes (additional electrodes) column 3, line 65 through column 4, lines 7).

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate Yoo's device teaching an auxiliary electrodes (additional electrodes) into Yoo et al. device so as to generate continuously a display discharge by the charge particles (column 4, lines 5-7).

As to claim 13, Yoo et al. teach address electrode to be perpendicular to the address electrode at a position adjacent to an intersection between the address electrode and the scanning electrode, and is arranged at a position parallel to the scanning electrode (column 4, line 25 through column 5, line 20).

6. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoo et al. in view of Yoo as applied to claim 10 above, and further in view of Bae (5,991,416).

As to claim 11, Yoo et al. and Yoo teach all claimed limitation except that a high pass filter.

However, Bae (figures 1 and 3) teaches a high pass filter (13) (column 5, lines 5-67)..

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to combine Bae's device having a high pass filter into Yoo et al's device so as to increase the versatility of the device.

As to claim 12, Yoo et al. and Yoo teach all claimed limitation except that a first low pass filter a second low pass filter.

However, Bae (figures 1 and 3) teaches a first low pass filter a second low pass filter (10-12, and 14-16) (column 5, lines 5-67).

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to combine Bae's device having a high pass filter into Yoo et al's device so as to increase the versatility of the device.

Allowable Subject Matter

7. Claims 4-6, 8-9 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Betsui et al (5,967,872) disclose a plasma display has a matrix of plural first straight electrodes and plural straight second electrodes.

Shinoda et al. (6,097,357) disclose a full color surface discharge type plasma display device.

Kuriyama et al. (6,104,362) disclose a panel display has a display panel including a plurality of cells to be selectively discharged to an address driver for setting the plurality of cells to states represented by display data.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Mansour M. Said** whose telephone number is **(703) 306-5411**.

The examiner can normally be reached on Monday through Thursday from 8:30 a.m. to 6:00 p.m. The examiner can also be reached on alternate Friday from 8:30 a.m. to 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Shalwala Bipin**, can be reached at **(703) 305-4938**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist)

10. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer service Office whose telephone number is (703) 306-0377.

Patent Examiner

August 23, 2002

Mansour M. Said

VIJAY SHANKAR
PRIMARY EXAMINER